WHAT IS CLAIMED IS:

1. A synchronization method for synchronizing a receiver with a transmitted signal, comprising the steps of:

selecting a frequency channel and receiving a signal;

filtering, amplifying and sampling the signal to generate signal samples for processing;

processing said samples using a first code to detect correlation with said first code;

upon detection of correlation with said first code, processing said same signal samples using a timing identified by said detected correlation and at least one second code to detect correlation with said at least one second code;

upon detection of correlation with said at least one second code, processing said same signal samples using a code related to said second code to decode transmitted information; and

testing for correct decoding of said information to verify correct synchronization.

2. The method according to claim 1 in which said step of selecting a frequency channel further comprises the step of:

selecting said frequency channel from a prioritized channel list.

3. The method of claim 2 in which said prioritized channel list is prioritized based on memorized historical information.

4. The method of claim 2 in which said prioritized channel list is prioritized in order of received signal strength on each channel.

5. The method of claim 2 in which said prioritized channel list is prioritized based on the channels on which synchronization was achieved most recently.

6. The method of claim 2 in which said prioritized channel list is prioritized such that channels on which synchronization has not historically been achieved are given a low priority.

7. The method of claim 2 in which said channel list is prioritized based on measured received signal strength on each channel and on historical information.

8. The method of claim 7 in which channels with signal strength above a threshold at which synchronization has previously been achieved are given a high priority and channels with signal strength below a threshold at which synchronization has previously not been achieved are given a low priority.

9. The method of claim 1 in which said filtering, amplifying and sampling step to generate signal samples further comprises the step of:

analog-to-digital converting at a sampling rate of at least one sample per signaling symbol interval.

10. The method of claim 1 in which said step of processing with a first code further comprises the step of:

correlating a selected block of signal samples with corresponding symbols of said first code, selecting each signal sample in turn to be the start of said block.

11. The method of claim 10 in which said block correlations are performed using a sliding correlator.

12. The method of claim 10 in which said block correlations are performed using a matched filter.

13. The method of claim 1 in which said transmitted signal includes a repetitive pattern with a fixed repetition period of a whole number of signaling symbols.

14. The method of claim 13 in which said step of processing to detect correlation with said first code further comprises the step of:

forming a correlation value for each alignment of said first code with a symbol position within said repetition period and accumulating said correlation values having the same alignment in successive repetition periods in a bin for each alignment.

15. The method of claim 14 further comprising the step of:

compensating said accumulation for timing drift.

16. The method of claim 15 wherein said step of compensating further comprises the step of:

periodically replacing a cumulative value by a largest of three adjacent cumulative values.

17. The method of claim 16, wherein said period is related to an accumulation time over which timing drift of the order of one signaling symbol is likely.

18. The method of claim 14 in which a minimum value over all of said bins is subtracted from all of said bins to prevent numerical growth and to form differential bin values.

19. The method of claim 18 in which detecting correlation with said first code occurs when one of said differential bin values exceeds a predetermined threshold.

20. The method of claim 19 in which a bin value exceeding said

predetermined threshold is set to zero after said detection and then accumulation in said bin is continued.

21. A method for synchronizing a receiver with a transmitted signal, comprising the steps of:

selecting a frequency channel and receiving a signal;

filtering, amplifying and sampling the signal to generate signal samples for processing;

processing said samples using a first code to detect correlation with said first code; and

after detecting said correlation with said first code, continuing to process further signal samples to detect further correlations with said first code while processing said same further signal samples to detect a second code.

22. A method for synchronizing a receiver with a transmitted signal comprising the steps of:

sequentially tuning said receiver to successive frequency channels and measuring received signals strength on said channels;

forming said frequency channels into a first list for testing in a prioritized order;

tuning said receiver to the channel in said first list with highest priority and receiving a signal;

starting a timer to record time spent tuned to said channel and to compare the recorded time with a time-out value;

filtering, amplifying and sampling the received signal to generate signal samples for processing;

processing said signal samples using a first code to detect correlation with said first code;

upon detecting correlation with said first code, recording in a second list the timing position within said signal samples of each such detected correlation;

if said second list contains one or more entries, processing said signal samples to detect correlation with at least one second code at the corresponding recorded timing position; and

if said timer reaches said time-out value, retuning said receiver to the channel of next highest priority in said first list and resetting said timer.

23. A receiver for detection of synchronisation with a transmitter, comprising:

filtering, amplifying and conversion means for receiving signals and producing signal samples for processing;

correlation means for correlating said signal samples with a first code using time-shifts between said received signal samples and said first code and for correlating said same signal samples with at least one second code at specified time-shifts;

first detection means for detecting time shifts at which correlation with said first code exceeds a first threshold and recording said time-shifts in a first memory;

control means for specifying the time-shifts to said correlation means for performing correlations with said at least one second code based on the time-shifts recorded in said first memory;

second detection means for detecting when a correlation with said at least one second code specified by said control means exceeds a second threshold and for recording the associated at least one second code and time-shift in a second memory;

confirmation means for processing said same signal samples using a code based on said second code to decode information and performing a decoding error check; and

deletion means for deleting records from said second memory when said confirmation means indicates decoding error.

24. A method of synchronizing a receiver with a transmitted signal, said transmitted signal comprising a first and second repeated coded pattern having a determined repetition period, comprising the steps of:

selecting a frequency channel and receiving a signal;

filtering, amplifying and sampling the signal to generate signal samples for processing;

correlating said signal samples with said first coded pattern using different timing shifts in said repetition period between said first coded pattern and said signal samples to produce a first correlation value for each time shift;

accumulating correlation values that correspond to the same time shift in successive repetition periods in corresponding timing bins;

detecting when the cumulative value in one of said timing bins exceeds the value in another of said timing bins by more than a first threshold and recording the timing bin number in a first memory;

when said memory contains at least one timing bin number, correlating said same signal samples with said second repeated code pattern using timing shifts corresponding to said recorded timing bin numbers and producing corresponding second correlation values; and

accumulating said second correlation values in a number of second bins, each corresponding to an entry recorded in said first memory while continuing to accumulate said first correlation values in said timing bins.

25. A method for transmitting a Code Division Multiple Access signal comprising the steps of:

transmitting paging information having a repetitive frame structure on a given frequency using a first spread-spectrum access code, said paging information being used to address specific receivers;

transmitting traffic information to individual receivers on said same given frequency using one of a set of second spread spectrum access codes assigned to

each receiver, said traffic transmissions overlapping in time with said paging information; and

periodically transmitting a narrowband signal having substantially narrower bandwidth than said traffic and paging transmissions with a periodicity related to said repetitive frame structure.

26. The CDMA method according to claim 25 in which said step of periodically transmitting a narrowband signal further comprises the step of:

transmitting a burst of unmodulated, continuous wave energy.

27. The CDMA method of claim 25 in which said periodicity has a sliding time relationship with said frame structure.

28. A method for time-synchronizing a receiver with a transmitted signal and determining a coarse frequency error estimate, comprising the steps of:

computing correlations between received signal samples and known symbols included in said transmitted signal at periodic intervals, using several time-shifts between said received signal samples and said known symbols corresponding to early and late timing postulates;

combining successive correlations corresponding to the same timing postulate using a combining method with no frequency error compensation to obtain first cumulative correlations;

combining correlations made with successively later timing postulates using a combining method compensated for a receiver frequency that is relatively high compared to the transmitted signal frequency to obtain second cumulative correlations;

combining correlations made with successively earlier timing postulates using a combining method compensated for a receiver frequency that is relatively low compared to the transmitted signal frequency to obtain third cumulative correlations; and

determining the largest of said first, second and third correlations to determine a timing and a coarse frequency error estimate.